

W5YI

Nation's Oldest Ham Radio Newsletter

REPORT

Up to the minute news from the world of amateur radio, personal computing and emerging electronics. While no guarantee is made, information is from sources we believe to be reliable. May be reproduced providing credit is given to The W5YI Report.

Telephone: (817) 461-6443

Fred Maia, W5YI, Editor, P.O. Box 565101, Dallas, TX 75356-5101

★ In This Issue ★

**FCC Begins VE License Revocation
Ham Asks FCC to Reconsider Petition**

...Says he was not notified of RM Number

ORACLE Tries to Influence NZ Gov't

...Regarding Ham Morse Code Requirement

**Canadian Amateur Gets Key ITU Post
Annual Amateur Service Growth**

...By State and License Class Held

June VE & Licensing Statistics

**More on Direct Satellite Broadcasting
Information Superhighway "on Hold"**

Ham Radio Shopper: Instant Success

Sixty Years of Growth at the FCC

Radio Broadcasting in Cyberspace

Vol. 16, Issue #20

\$1.50

PUBLISHED TWICE A MONTH

October 15, 1994

Volunteer Examiners Face Ham License Revocation

The Commission has begun license revocation proceedings against three amateurs that the FCC alleges were involved in a scheme that would have resulted in several fraudulent amateur radio operator licenses being issued. The examination session in question was supposedly held in Los Angeles, California on August 15, 1993.

James B. Williams, AA6TC, 74, of Wilmington, CA and Rose Marie Flores, N6WPR, 45, and Robert L. Flores, N5WPQ, 31, of Santa Monica, California were ordered to show cause why their station licenses should not be revoked and their operator privileges suspended. All hold Amateur Extra Class operator licenses.

The FCC said in a *Order to Show Cause and Suspension Order* adopted September 20th that it appears the trio and a fourth person were volunteer examiners (VEs) at an amateur operator license examination session held at the Carol Little Company in Los Angeles.

It is undisputed that they administered examinations at that session to seven members of a class that had been held for Company employees. The VEs claim that they also examined numerous additional persons at the same session. Information available to the Commission, however, indicates that these examiners did not examine additional persons.

The FCC said that it appears that the VEs "...willfully signed VE certifications and *Certificates of Successful Completion of Examinations*

(CSCEs) indicating that persons who were not examined at the Company session had passed the examination elements required for amateur operator licenses at that session."

The FCC believes that Rose Marie Flores was in charge of the examination session and obtained the signatures of the other VEs. "It appears, therefore, that the respondents assisted other persons to obtain amateur operator licenses by fraudulent means, in repeated and willful violation of [the rules] and that the respondents made misrepresentations of material fact to the Commission."

The FCC said that the alleged "second sitting" on August 15th never took place contrary to claims in letters received from Williams and Rose Marie and Robert Flores.

The Show Cause Order seeks to determine if these volunteer examiners violated FCC rules, misrepresented material facts, whether they are qualified to remain Commission licensees and whether their station licenses should be revoked and their operator licenses suspended.

James Williams, Rose Marie and Robert Flores were given the opportunity to file a request for a hearing within 30 days of receiving the Show Cause Order. The FCC will also consider written statements from each respondent not requesting a hearing and will determine, without a hearing, whether revocation and/or suspension is warranted. Failure to request a hearing or providing a

W5YI REPORT

Nation's Oldest Ham Radio Newsletter

Page #2
October 15, 1994

written statement will result in license revocation 30 days after receipt of the Order, the FCC wrote.

In a prior May 31, 1994 letter to James B. Williams, the FCC also said that an informant had provided them with information concerning the payment of money by an applicant in order to obtain an amateur operator license without examination. This individual supposedly drove 2,100 miles round trip over a week-end to be administered the examinations.

The FCC said "It is not believable that anyone would undertake such a trip to take an examination that he could have taken in his own area." James B. Williams, AA6TC participated in this individual's examinations in 1991 and 1992 which were coordinated by the DeVry-VEC and W5YI-VEC. Williams denied knowing the applicant until after the first examination.

In addition, the FCC said, "An informant asked you, in a telephone conversation monitored by the Commission with the consent of the informant, for assistance in obtaining an amateur operator license. As a result of that telephone conversation, the informant was offered an opportunity to obtain an amateur operator license without examination through the payment of money."

James B. Williams, AA6TC was given 20 days to respond to these and other allegations. Williams responded to the FCC letter on June 5th. He denied any wrongdoing and said he would like to confront the informant who said that he would "help" him obtain a license by fraudulent means. On Sept. 27th, the FCC began license revocation proceedings against J. B. Williams.

The FCC, W5YI-VEC and the ARRL-VEC identified many irregularities on 1992 and 1993 test papers involving Williams and examinations he administered. Also questioned is whether certain other test sessions in 1993 actually took place. The W5YI-VEC, working with the ARRL discredited several VEs and invalidated many new licenses and upgrades of applicants who were examined at southern California test sessions in June and Aug. 1993. This action won both VECs a letter of commendation from the FCC's Personal Radio Branch. (See QST, Jan. 1994, Page 84.)

The FCC is also looking into the activities of a Larry McKee from Oregon. The Commission says that several persons have given them information indicating that Mr. McKee may be involved in a scheme through which many persons may have obtained amateur service licenses fraudulently.

Mr. McKee was asked in a Sept. 15th letter from the FCC to respond to the question, "Did you provide anyone with assistance or offer assistance to anyone in obtaining an amateur license without examination. If so, provide complete details." There is also a question about whether Mr. McKee can read or write.

AMATEUR FILES PETITION FOR RECONSIDERATION

Rolf Jespersen, N3LA, (Extra Class) of Spring City, PA has filed a *Petition for Reconsideration* of his November 4, 1993 proposal to reduce the Morse code speed requirements for the Amateur Extra and General license classes and to reduce the number of license classes from five to three.

He feels "The emphasis on examination in the ability to copy Morse code by ear ought to be minimized in light of the dwindling use of this mode and increased use of modes such as digital transmissions..." He argues that Morse code was abandoned by the U.S. Coast Guard (for distress alerts on 500 kHz) in 1993 and by the Boy Scouts of America (as a radio merit badge requirement) in 1991.

Basically, Jespersen's asks the FCC to eliminate the Novice and Advanced Classes leaving only three: Technician, General and Amateur Extra Class. The minimum code requirement for the General Class would be 5 words-per-minute; Amateur Extra: 13 wpm. The written requirement for each of the remaining three classes would be 50 multiple choice questions. (This line up was first suggested as a possible license simplification alternative in a Washington Readout column written by W5YI for the Nov. 1992 issue of CQ Magazine.)

N3LA says he checked with the FCC in Gettysburg, PA and was told that the accompanying reduction in upgrade operations per year would save the FCC "...one half man-year per year."

"With the many modes of operation we have available today, there is a minimal number of Amateur Radio licensees who take to Morse code operation as a mode they enjoy," he added in his petition.

Jespersen says his petition was more than two years in the making and has the support of amateurs in his area. "Two-to-one they said they were in favor." He said there was a similar acceptance on Internet and packet radio.

N3LA is particularly critical of the FCC's notification policies. He said he and others have been waiting for six months to find out whether or not there would be an RM number assigned to his petition. The FCC accepted the petition as having merit and assigned it RM-8391. According to Jespersen, however, he was never notified of that acceptance nor that the proposal had been assigned a 30 day preliminary comment period.

He found out about the RM-number on May 5, 1994 when the FCC sent him an unsigned *Order* rejecting his petition as being repetitive. Jespersen said the only notification he received from the FCC was a return receipt he paid to have the postal service acknowledge that the document was delivered to the Commission. He believes no comments were filed on his proposal because no one was aware that the

WSYI REPORT

Nation's Oldest Ham Radio Newsletter

Page #3

October 15, 1994

petition had indeed been filed.

A phone call to the FCC in Washington, DC he says, yielded the information that new petitions are put out in a Reading Room and publicized in the Federal Register. A phone call to the FCC's division office asking for the date that his petition was announced has yet to be returned to him, he says.

"I am disturbed over the fact that my petition was rejected without letting me know that it had even been assigned an RM number, that I was told about it too late to have my friends, supporters, enemies and opponents file their views."

Jespersion, a retired commercial merchant marine radio operator from Norway, said "...incentive licensing has proved to be a failure that threatened to be the demise of Amateur Radio until the advent of the No-code Technician license."

Rolf says he conducts on-the-air code training for two hours each evening and "I am finding out that learning code is as difficult as I found it when I was 19 years old. But the increasing difficulties with age are almost impossible to describe, and I compare it to learning the multiplication tables for the first time after you are 65 years old. We tried to train a man 82 years old, and found it impossible. He could not remember three letters from one day to the next, yet he was functional in his business."

Jespersion points out that the ITU rules do not require Morse code "proficiency"...only "ability." He adds, "The only reason we have any Novice testing at all, is because there are groups out there that will not hold licensing classes unless Morse code is included."

He wants the 5 wpm code speed used as credit toward the General license. "The Advanced class is simply a final resting place for many who can't master the 20 wpm code. A lot of Amateur Extra Class get their license to be able to participate in the VE examination program. I know a lot of no-code Extras who have somehow managed to pass the code and then forgotten it for lack of use, sometimes deliberately."

"The benefits of adopting RM-8391 would be an increase in a much needed growth of the Radio Amateur community with a reduced burden to the Licensing Division in Gettysburg, and reduced delays in new and upgrade licensing." N3LA's *Petition for Reconsideration* concludes.

ORACLE'S CAMPAIGN TO ELIMINATE TELEGRAPHY REQUIREMENT FOR HF HAM BAND OPERATION

We mentioned in our Aug. 15th issue (see page 4) that an amateur group out of New Zealand was leading a major effort to change the international Morse code proficiency requirements. ORACLE (the *Organization Requesting Alternatives by Code-Less Examinations*) wants RR2735 amended to allow individual

countries to decide whether or not they want to require telegraphy knowledge when the amateur radio operation takes place below 30 MHz. RR2735 is part of Article 32, Section I, §3 of the International Radio Regulations which defines the Amateur and Amateur-Satellite Service and its requirements for participation.

There are two *World Radiocommunication Conferences* (WRCs) where this matter could be discussed. One takes place next year. The next opportunity after that is in 1997. At this stage, the ORACLE managers have decided to focus on their own national position in New Zealand. Should their effort fail to get the matter on the WRC-95 conference agenda, then the campaign can be expanded to other countries by the formation of sister organizations throughout the world.

The following document has now been filed with the New Zealand telecommunications authorities by the six ORACLE managers. The intention of this paper is to convince the New Zealand administration that the modification of RR2735 matter can be placed on Agenda Item No. 1 at WRC-95.

It had previously been suggested that the WRC-95 agenda had already been determined and was very specific ...and that the addition of new items might not be possible. ORACLE contends that the importance of Morse proficiency to telecommunications is not a new item and is already on the agenda. Here is the text of the ORACLE document:

RELEVANCE OF MODIFICATION OF RR2735 TO THE WRC-95 AGENDA

Item 1 of the agenda for WRC-95 is:

To review the final report of the VGE (Voluntary Group of Experts) and to consider related proposals from administrations, in order to undertake as appropriate a revision of the Radio Regulations and to provide a timetable for the implementation of outstanding recommended actions.

In the context of the VGE Report and a common theme of Morse code proficiency, we note the presence of a near parallel example between the VGE recommendation regarding RR2800 in the *Experimental Service* and our proposal to modify RR2735 in the *Amateur Service*.

RECOMMENDATION FOR SUPPRESSION OF RR2800:

The VGE report recommends suppression of RR2800 for the reasons that the purpose is better covered by No. 2801 (refer to page 179 of the VGE Report, Part C).

Texts of these current international regulations are:

RR2800 *In experimental stations any person operating radiotelegraph apparatus, either on his own account or for another, shall have proved his ability to transmit by hand and to receive by ear, texts in Morse code signals.*

RR2801 *Administrations shall take such measures as they judge necessary to verify the operational and technical qualifications of any person wishing to operate the apparatus of an experimental station.*

WSYI REPORT

Nation's Oldest Ham Radio Newsletter

Page #4

October 15, 1994

We presume that the VGE considers Morse code proficiency to be an anachronistic [obsolete or archaic] specific requirement, and in any case each administration can continue to address the matter nationally if they so choose. We support this recommendation of the VGE for similar reasons that we propose change to RR2735.

SIMILAR SCOPE OF RR2735 AND RR2800:

The text of the current international regulation is:

RR2735 Any person seeking a license to operate the apparatus of an amateur station shall prove that he is able to send correctly by hand and to receive correctly by ear texts in Morse code signals. The administrations concerned may, however, waive this requirement in the case of stations making use exclusively of frequencies above 30 MHz.

Regulations RR2735 and RR2800 are seen to be very similar in scope.

The objectives of the VGE in suppressing RR2800 appear to be similar to our proposals to modify RR-2735. We chose modification in preference to suppression, because some administrations may consider suppression to be too much of a change at this time. The text of the proposed modification, as previously submitted to the Ministry, is as follows:

MOD RR2735 Administrations may take such measures as they judge necessary to verify the proficiency in the use of Morse code of any person wishing to operate the apparatus of an amateur station.

Therefore we intend to actively seek both of the following:

- that our proposal to modify RR2735 and subsequently introduce alternative qualifications be accepted as New Zealand policy;
- that modification of RR2735 be placed by New Zealand on agenda item 1 for WRC-95.

We acknowledge that responses from other administrations need to be taken into account in deciding to progress the second point. However it is our aspiration to achieve both points.

ADDITIONAL POINT ON CONSISTENCY WITH THE ITU CONSTITUTION:

The first principle of the ITU Constitution is:

To maintain and extend international cooperation between all Members of the Union for the improvement and rational use of telecommunications of all kinds.

Our previous submission alleged that the current formulation of RR2735 is illogical, in that it attempts to associate spectrum access with a waiver frequency. We additionally allege that the formulation used by RR2735 is other than a "rational use of telecommunications" and is therefore in conflict with the very first point in the ITU Constitution.

THUS WE MAKE THE CASE THAT RR2735 CAN BE MODIFIED AT WRC-95:

The above explanation puts the case for modification of RR2735 to be able to be placed on the agenda for WRC-95.

The document is signed by:

Anthony Cole, ZL2AZJ
John Rumsey, ZL2LZ
Terry Waghorn, ZL2AYY

Grahame Love, ZL2TBK
Bob Vernal, ZL2CA
David Walker, ZL2BHE

Managers of: **Organization Requesting Alternatives by Code-Less Examinations.** (ORACLE, Inc.)

This group may be reached via the Internet at the following address: manager@wao.greta.cri.nz
(Anthony Cole, ZL2AZJ, Wellington, New Zealand)

CANADIAN AMATEUR ELECTED TO KEY ITU POST

The International Amateur Radio Union has elected Canadian radio amateur Robert W. Jones, VE3CTM to replace retiring Richard C. Kirby, WØLCT, as Director of its Radiocommunication Bureau.

Jones, 50, of Ottawa, is currently Director General of the Radio Regulatory Branch, under Industry and Science Canada, which regulates amateur and other radio services in Canada.

His work with the ITU began in 1975 in preparation for the 1977 and 1979 World Administrative Radio Conferences. From 1981 to 1983 he was director of a project to automate ITU frequency records. He has since served and headed Canadian delegations to numerous ITU conferences and working groups. Jones holds Master of Applied Science and Master of Business Administration degrees and attributes his professional interest in communications to having become a licensed radio amateur as a teenager in 1959.

The ITU is the United Nations specialized agency for telecommunications and is headquartered in Geneva, Switzerland. He was elected to his new post at the ITU Plenipotentiary Conference in Kyoto, Japan on Sept. 30.

ANNUAL STATUS OF HAM RADIO LICENSING... since the introduction of Code-Free Hamming

Once a year (after we receive the June FCC licensing stats) we publish a run down of the ham radio census by license class and state. The first U.S. No-Code Technician ticket was issued on March 12, 1991. In the following three years, the Amateur Service has grown by nearly 30%. That is double the growth rate of the preceding three year period.

Of the 146,568 newcomers to ham radio between 1991 and 1994, 113,312 are Technicians. On March 1, 1991, there were 129,386 Techs. Today there are 242,694 -- 28,951 of whom have passed a telegraphy examination. More than 38% of all amateurs now hold a Technician Class ticket.

Utah continues to lead the nation with 60% more amateurs in 1994 as in 1991. The complete licensing statistics by state are on the next page.

W5YI REPORT

Nation's Oldest Ham Radio Newsletter

Page #5

October 15, 1994

AMATEUR SERVICE GROWTH REPORT - MARCH 1, 1991 VS. JUNE 30, 1994

| STATE | EXTRA | | ADVANCED | | GENERAL | | TECHNICIAN | | PLUS | NOVICE | | TOTAL | | INC. |
|--------|--------|-------|----------|--------|---------|--------|---------------|--------|-------|--------|--------|--------|--------|-------|
| | 1991 | 1994 | 1991 | 1994 | 1991 | 1994 | 1991 | 1994 | 1994 | 1991 | 1994 | 1991 | 1994 | % |
| AL | 823 | 1004 | 1509 | 1684 | 1650 | 1769 | 2074 | 3694 | 331 | 1055 | 1021 | 7111 | 9493 | 33% |
| AK | 264 | 309 | 501 | 549 | 594 | 645 | 481 | 856 | 126 | 428 | 451 | 2268 | 2936 | 29% |
| AZ | 1022 | 1321 | 2214 | 2453 | 2324 | 2565 | 2680 | 4952 | 534 | 1267 | 1245 | 9507 | 13060 | 37% |
| AR | 443 | 643 | 868 | 1002 | 941 | 1025 | 1092 | 2123 | 306 | 621 | 624 | 3965 | 5723 | 44% |
| CA | 6756 | 8180 | 15124 | 16016 | 15897 | 16558 | 21340 | 36437 | 4494 | 15024 | 17306 | 74141 | 98991 | 34% |
| CO | 955 | 2051 | 1861 | 2143 | 2021 | 2143 | 2042 | 3498 | 476 | 1287 | 1338 | 8166 | 10638 | 30% |
| CT | 913 | 1067 | 1504 | 1570 | 1872 | 1942 | 1527 | 2253 | 458 | 1699 | 1695 | 7515 | 8985 | 20% |
| DE | 167 | 186 | 226 | 233 | 264 | 294 | 304 | 444 | 39 | 212 | 213 | 1173 | 1409 | 20% |
| DC | 74 | 82 | 104 | 101 | 123 | 132 | 64 | 112 | 14 | 80 | 82 | 445 | 523 | 18% |
| FL | 3144 | 4011 | 6876 | 7642 | 8061 | 8990 | 7244 | 11074 | 1561 | 6172 | 6887 | 31497 | 40165 | 28% |
| GA | 1118 | 1412 | 2206 | 2459 | 2346 | 2561 | 2817 | 4670 | 515 | 1466 | 1532 | 9953 | 13149 | 32% |
| HI | 265 | 302 | 502 | 519 | 564 | 570 | 602 | 959 | 136 | 663 | 692 | 2596 | 3178 | 22% |
| ID | 236 | 297 | 495 | 580 | 656 | 700 | 605 | 1162 | 160 | 404 | 422 | 2390 | 3303 | 38% |
| IL | 2122 | 2474 | 3968 | 4149 | 4758 | 4873 | 4900 | 7570 | 778 | 3637 | 3604 | 19385 | 23448 | 21% |
| IN | 1153 | 1422 | 2268 | 2410 | 2620 | 2772 | 3258 | 5062 | 621 | 2125 | 2096 | 11424 | 14383 | 21% |
| IA | 597 | 683 | 1359 | 1443 | 1479 | 1508 | 1116 | 1822 | 231 | 1037 | 1066 | 5588 | 6753 | 21% |
| KS | 562 | 712 | 1079 | 1127 | 1493 | 1570 | 1204 | 2175 | 335 | 1001 | 1051 | 5339 | 6970 | 31% |
| KY | 577 | 786 | 1069 | 1181 | 1326 | 1418 | 1525 | 2715 | 397 | 1198 | 1230 | 5695 | 7727 | 37% |
| LA | 665 | 786 | 1287 | 1357 | 1369 | 1422 | 1304 | 2288 | 302 | 914 | 926 | 5539 | 7081 | 28% |
| ME | 353 | 467 | 619 | 681 | 941 | 1025 | 591 | 1046 | 282 | 562 | 574 | 3066 | 4075 | 33% |
| MD | 1219 | 1439 | 2154 | 2259 | 2115 | 2275 | 2036 | 3454 | 398 | 1499 | 1522 | 9023 | 11347 | 26% |
| MA | 1633 | 1964 | 2635 | 2799 | 3232 | 3346 | 3087 | 4465 | 649 | 2201 | 2301 | 12788 | 15525 | 21% |
| MI | 1714 | 2048 | 3392 | 4294 | 4070 | 4294 | 3988 | 6444 | 958 | 2779 | 2674 | 15943 | 20022 | 19% |
| MN | 919 | 1097 | 1845 | 1967 | 2210 | 2348 | 1766 | 2944 | 468 | 1382 | 1321 | 8122 | 10145 | 25% |
| MS | 351 | 447 | 721 | 813 | 808 | 839 | 796 | 1482 | 162 | 538 | 549 | 3214 | 4292 | 34% |
| MO | 1048 | 1280 | 2050 | 2227 | 2471 | 2623 | 2126 | 3580 | 525 | 1567 | 1545 | 9262 | 11780 | 27% |
| MT | 229 | 295 | 387 | 432 | 559 | 578 | 356 | 748 | 126 | 351 | 360 | 1882 | 2539 | 35% |
| NE | 299 | 367 | 756 | 790 | 978 | 985 | 671 | 1038 | 186 | 516 | 496 | 3220 | 3862 | 20% |
| NV | 288 | 365 | 537 | 646 | 705 | 799 | 634 | 1269 | 137 | 354 | 363 | 2518 | 3579 | 42% |
| NH | 500 | 610 | 667 | 731 | 875 | 971 | 883 | 1362 | 226 | 586 | 590 | 3511 | 4490 | 28% |
| NJ | 1813 | 2095 | 3105 | 3200 | 3328 | 3487 | 3483 | 4964 | 728 | 2560 | 2700 | 14289 | 17174 | 20% |
| NM | 449 | 549 | 823 | 920 | 827 | 862 | 781 | 1572 | 166 | 388 | 386 | 3268 | 4475 | 37% |
| NY | 3059 | 3609 | 5588 | 5848 | 6565 | 6873 | 6715 | 10458 | 1638 | 6832 | 7100 | 28759 | 35526 | 24% |
| NC | 1213 | 1617 | 2498 | 2772 | 2706 | 2983 | 2913 | 5346 | 776 | 1780 | 1975 | 11110 | 15469 | 39% |
| ND | 119 | 149 | 232 | 247 | 354 | 375 | 251 | 459 | 78 | 260 | 252 | 1216 | 1560 | 28% |
| OH | 2423 | 2940 | 4660 | 4945 | 5281 | 5569 | 7098 | 10736 | 1482 | 4393 | 4179 | 23845 | 29851 | 25% |
| OK | 663 | 861 | 1385 | 1472 | 1379 | 1484 | 1754 | 3051 | 1131 | 1086 | 1131 | 6267 | 8333 | 33% |
| OR | 908 | 1154 | 1903 | 2100 | 2416 | 2623 | 2234 | 3653 | 546 | 1637 | 1633 | 9098 | 11709 | 29% |
| PA | 2303 | 2861 | 4141 | 4461 | 4856 | 5135 | 4713 | 7109 | 1098 | 3701 | 3705 | 19714 | 24369 | 24% |
| RI | 238 | 303 | 325 | 361 | 512 | 535 | 532 | 737 | 128 | 383 | 423 | 1990 | 2487 | 25% |
| SC | 488 | 618 | 968 | 1062 | 1231 | 1326 | 1164 | 1867 | 247 | 657 | 693 | 4508 | 5813 | 21% |
| SD | 139 | 157 | 307 | 318 | 354 | 377 | 244 | 410 | 54 | 174 | 177 | 1218 | 1493 | 23% |
| TN | 1010 | 1374 | 2074 | 2292 | 2038 | 2261 | 2851 | 4664 | 570 | 1520 | 1502 | 9493 | 12663 | 33% |
| TX | 3555 | 4344 | 6726 | 7315 | 7143 | 7707 | 7934 | 13025 | 1506 | 4473 | 4414 | 29831 | 38311 | 28% |
| UT | 352 | 434 | 689 | 789 | 651 | 729 | 1333 | 2988 | 391 | 775 | 759 | 3800 | 6090 | 60% |
| VT | 181 | 229 | 293 | 316 | 381 | 425 | 307 | 615 | 115 | 228 | 231 | 1390 | 1931 | 39% |
| VA | 1552 | 1925 | 2718 | 2975 | 2896 | 3081 | 2759 | 4743 | 754 | 1994 | 2085 | 11919 | 15563 | 31% |
| WA | 1714 | 2170 | 3327 | 3682 | 4050 | 4432 | 4230 | 7406 | 1060 | 3157 | 3161 | 16478 | 21912 | 33% |
| WV | 376 | 509 | 629 | 720 | 849 | 935 | 969 | 2064 | 358 | 942 | 885 | 3765 | 5471 | 45% |
| WI | 873 | 1062 | 1765 | 18064 | 2165 | 2186 | 1701 | 3051 | 427 | 1357 | 1296 | 7710 | 9828 | 27% |
| WY | 133 | 166 | 203 | 230 | 264 | 282 | 251 | 501 | 74 | 243 | 223 | 1094 | 1476 | 35% |
| GU | 28 | 51 | 41 | 50 | 41 | 55 | 59 | 126 | 32 | 169 | 173 | 338 | 487 | 44% |
| PR | 204 | 248 | 480 | 551 | 605 | 687 | 1937 | 2166 | 391 | 3462 | 4430 | 6688 | 8473 | 27% |
| VI | 30 | 54 | 51 | 55 | 68 | 81 | 55 | 106 | 12 | 44 | 44 | 248 | 352 | 42% |
| Other | 14 | 79 | 14 | 60 | 20 | 67 | 5 | 227 | 54 | 25 | 53 | 78 | 540 | *** |
| Total: | 54246 | 66746 | 105628 | 114022 | 120241 | 128097 | 129386 | 213743 | 28951 | 94859 | 99369 | 504360 | 650928 | 29.1% |
| % | 10.8% | 10.3% | 20.9% | 17.5% | 23.9% | 19.7% | 25.6% | 32.8% | 4.4% | 18.8% | 15.3% | 100% | 100% | |
| % Inc. | +23.0% | | +7.9% | | +6.5% | | 242694 +87.6% | | +4.8% | | +29.1% | | | |

(*** = Other includes U.S. possessions and in 1994, APO/FPO addresses. Figures not comparable.)

W5YI REPORT

Nation's Oldest Ham Radio Newsletter

Page #6

October 15, 1994

JUNE VE PROGRAM STATISTICS

| <u>June</u> <u>No. VEC's</u> | <u>1992</u> <u>18</u> | <u>1993</u> <u>18</u> | <u>1994</u> <u>18</u> |
|---------------------------------|--------------------------|--------------------------|--------------------------|
| <u>Testing Sessions</u> | <u>880</u> | <u>1109</u> | <u>1105</u> |
| <u>VEC</u> | <u>1992</u> | <u>1993</u> | <u>1994</u> |
| ARRL | 53.8% | 54.7% | 65.8% |
| W5YI | 31.4 | 33.1 | 24.7% |
| CAVEC | 3.4 | 3.2 | 2.2 |
| WCARS | 1.8 | 1.6 | 1.2 |
| SunnyV | 1.8 | 0.7 | 0.8 |
| GtLakes | 2.3 | 1.0 | 0.1 |
| Others (12) | 5.5 | 5.7 | 5.2 |
| <u>Year-to-Date Sessions</u> | <u>5110</u> | <u>5501</u> | <u>5985</u> |
| <u>Elements Administ.</u> | <u>16811</u> | <u>21140</u> | <u>19878</u> |
| <u>VEC</u> | <u>1992</u> | <u>1993</u> | <u>1994</u> |
| ARRL | 56.8% | 57.1% | 68.8% |
| W5YI | 25.1 | 26.3 | 17.5 |
| CAVEC | 3.3 | 3.2 | 2.0 |
| WCARS | 1.7 | 1.9 | 1.1 |
| SunnyV | 3.8 | 2.0 | 1.8 |
| GtLakes | 2.1 | 1.2 | 0.6 |
| Others (12) | 7.2 | 8.3 | 8.2 |
| <u>Year-to-Date Elements</u> | <u>108510</u> | <u>106256</u> | <u>108554</u> |
| <u>Applicants Tested</u> | <u>10180</u> | <u>12378</u> | <u>11668</u> |
| <u>VEC</u> | <u>1992</u> | <u>1993</u> | <u>1994</u> |
| ARRL | 56.1% | 56.3% | 67.2% |
| W5YI | 25.3 | 26.5 | 19.4 |
| CAVEC | 3.3 | 3.2 | 1.9 |
| WCARS | 1.7 | 1.7 | 0.1 |
| SunnyV | 3.4 | 1.9 | 1.5 |
| GtLakes | 2.1 | 1.2 | 0.1 |
| Others (12) | 8.1 | 9.2 | 9.8 |
| <u>Year-to-Date Tested</u> | <u>64683</u> | <u>62278</u> | <u>62764</u> |
| <u>June</u> | <u>1992</u> | <u>1993</u> | <u>1994</u> |
| Pass Rate - All | 64.9% | 64.5% | 63.6% |
| Applicants/Session | 11.6 | 11.6 | 10.6 |
| Elements/Applicant | 1.7 | 1.7 | 1.7 |
| Sessions Per VEC | 48.9 | 61.6 | 61.4 |

Administrative Errors by VE's/VEC's

| <u>June</u> | <u>1992</u> | <u>1993</u> | <u>1994</u> |
|----------------------|-------------|-------------|-------------|
| Defect. Applications | 0.2% | 0.2% | 0.1% |
| Late Filed Sessions | 1.3% | 2.6% | *9.0% |
| Defective Reports | 0.1% | 0.1% | 0.1% |

* = Just about all late sessions were filed by ARRL.

Note: The two largest VEC's, (ARRL/W5YI) accounted for 90.5% of all June 1994 test sessions. 86.3% of the exam elements and 86.6% of the applicants

[Source: Personal Radio Branch/FCC; Washington, D.C.]

JUNE AMATEUR LICENSING STATISTICS

| <u>June</u> | <u>1991</u> | <u>1992</u> | <u>1993</u> | <u>1994</u> | |
|--|---------------|----------------|-----------------|---------------|---------------|
| New Amateurs: | | | | | |
| New Novices | 1088 | 1371 | 1189 | 13* | |
| New Tech's | <u>2112</u> | <u>4525</u> | <u>4725</u> | <u>341*</u> | |
| Total New: | 3231 | 5957 | 5978 | 381* | |
| <u>Upgrading:</u> | | | | | |
| Novices | 1002 | 1569 | 834 | N/A* | |
| Technicians | 420 | 1156 | 822 | N/A* | |
| Generals | 275 | 632 | 613 | N/A* | |
| Advanced | <u>191</u> | <u>492</u> | <u>367</u> | <u>N/A*</u> | |
| Total: | 1888 | 3849 | 2633 | N/A* | |
| <u>Renewals:</u> | | | | | |
| Total Renew: | 45 | 89 | 262 | 1* | |
| Novices | 1 | 13 | 18 | 0* | |
| <u>Purged:</u> | | | | | |
| Total Dropped: | 11 | 27 | 10 | 0* | |
| Novices | 2 | 4 | 0 | 0* | |
| <u>Census:</u> | | | | | |
| Indiv. Oper. | 520919 | 571280 | 614701 | 650929 | |
| Change/Year | +69041 | +50361 | +43421 | +36228 | |
| <u>Individual Operators by Class: (and % of total)</u> | | | | | |
| <u>Extra</u> | <u>Advan.</u> | <u>General</u> | <u>Technic.</u> | <u>Novice</u> | <u>Total:</u> |
| <u>June 1991</u> | | | | | |
| 55425 | 106461 | 121204 | 140858 | 96970 | 520919 |
| 10.7% | 20.4% | 23.3% | 27.0% | 18.6% | 100.0% |
| <u>June 1992</u> | | | | | |
| 59720 | 109020 | 124202 | 179761 | 98577 | 571280 |
| 10.5% | 19.1% | 21.7% | 31.5% | 17.2% | 100.0% |
| <u>June 1993</u> | | | | | |
| 63527 | 111523 | 126462 | 212465 | 100724 | 614701 |
| 10.3% | 18.1% | 20.6% | 34.7% | 16.3% | 100.0% |
| <u>June 1994</u> | | | | | |
| 66746 | 114022 | 128097 | 242694 | 99369 | 650928 |
| 10.3% | 17.5% | 19.7% | 37.2% | 15.3% | 100.0% |
| Club/ | | | | | |
| RACES & | | | | | |
| | <u>(1990)</u> | <u>(1991)</u> | <u>(1992)</u> | <u>(1993)</u> | |
| Military: | <u>2432</u> | <u>2431</u> | <u>2431</u> | <u>2344</u> | |
| Total Active: | 523351 | 573711 | 617132 | 653272 | |
| % Increase | +15.2% | +9.6% | +7.6% | +5.9% | |

IMPORTANT NOTE REGARDING ABOVE STATISTICS:

During June 1994, the FCC began implementing the new Amateur Service data processing system and discontinued the old Honeywell computer. We are told that many of the statistics generated during June may not be accurate. The number of new amateurs, renewals and purged records (amateurs who did not renew their license) is known to be understated.

During June, the FCC began issuing Technician Plus licenses for the first time. They also added the VEC's database of Tech Plus licensees to their database. This resulted in 213,743 No-Code Techs - and 28,951 Techs with HF privileges. (Total: 242,694)

[Source: FCC Licensing Facility, Gettysburg, PA]

WSYI REPORT

Nation's Oldest Ham Radio Newsletter

Page #7

October 15, 1994

TECHNOLOGY UPDATE!

- In the eighties, over-the-air terrestrial broadcast television shifted to wireline. Cable penetration in the U.S. now stands at 62.5%. (58.8 million cable subscribers out of a TV household universe of 91.4 million.) Will it swing back to over-the-air in the nineties? Many big companies are betting on it! Direct Broadcast Satellite (DBS) activity is coming on strong!

- To compete with rapidly expanding DirectTV and USSB, PrimeStar Direct-to-Home satellite service is trying to expand from 70 to 200 channels and go to high power which requires only an 18" dish.

PrimeStar is owned by six different cable companies (including the nation's biggest, TCI) and General Electric. At present, due to its lower power, PrimeStar requires a 36" dish. If the FCC approves the plan, two new PrimeStar DBS satellites will come on line in 1996. New receiving hardware will be needed, however. DirectTV's hardware will not be able to receive PrimeStar.

- Colorado-based, EchoStar Communications is still another group that plans to offer high-powered direct-to-home satellite television service in the United States.

Their satellites are being built by Martin-Marietta Corp. The big news, however, is who is launching them! EchoStar's two DBS satellites will be placed in geosynchronous (stationary) orbit aboard rockets fired from mainland China. Approval has been granted by from the U.S. Commerce Department. First launch is scheduled next fall, the second in late 1996.

The satellites will beam 100 channels of digital video and 250 channels of digital audio throughout the continental U.S.

- Giant HSN buys little ISN! - A Menlo-Park (Calif.) start-up company by the name of the Internet Shopping Network began operation in May 1994 without much fanfare. They offer a discount point/click/ship shopping service on the Internet. Their slogan: "Where the Global Village Shops."

Last month, however, they zoomed to national prominence when they were

bought out by the Home Shopping Network who see this as another (and low cost) way to reach millions of consumers. HSN also plans to establish a "shopping mall" on the Internet and sell "real estate" ...a very innovative concept when you figure no one owns the Internet! For further information contact: info@internet.net or browse at <http://shop.internet.net>

- "Chicago" is the code name for super secret Windows95 - the new updated version of Microsoft's best selling graphical user interface (GUI). It won't be available until next year and Beta testers (sworn to secrecy) are putting it through its paces.

We understand "Chicago" doesn't rely on MS-DOS (with its 640K memory constraints.) Instead it uses its own internal 32-bit operating system. Reportedly, it also has a "plug & play" feature ...i.e. automatic installation and configuration of programs and peripherals. It is backward compatible to Windows 3.1 and MS-DOS and supposedly has an Icon for the new Microsoft "Marvel" online information service that is on the drawing boards.

- Blockbuster Video is a different story! They recently merged with Viacom. It's new name is the Blockbuster Entertainment Group. Entrepreneur Wayne Huizenga bought the company in 1987 for \$18 million. When the company was sold last month for \$7.6 billion, Huizenga owned some 17 million shares of Blockbuster stock worth some \$700 million.

In the past seven years, Blockbuster's stock price has risen 4,000% ...its market value from \$30 million to \$8.5 billion. Some people think he got out just in time now that video-on-demand is supposedly on the way.

- Prodigy offers Internet Access - Beginning this month, the Prodigy Information Service plans to give its 2-million subscribers access to the thousands of bulletin boards known as Usenet on the Internet. Prodigy is a joint venture of Sears Roebuck and IBM.

- There will be no Information Superhighway legislation this year. Democrats are blaming the telephone industry ...and Minority Leader Bob Dole (R-

Kansas) for killing it. Senator Commerce Committee Chairman Ernest Hollings (D-SC) withdrew the bill late last month.

The biggest hangup seemed to be that the Regional Bell telephone companies wanted to compete in the long distance telephone market without giving up their local telephone service monopoly.

The sweeping rewrite of the Communications Act of 1934 would have allowed telephone and cable companies to offer new services and compete in each others markets.

New Information superhighway telecommunications bills will be introduced into the new Congress next January. Meanwhile, "road builders" are pushing on with new technologies.

- An interesting article in the Oct. issue of *Monitoring Times* tells how those high-tech NFL helmets work. You know, the one coaches use to call in plays to their quarterback. An automatic cutoff allows the device to be used only until the play clock runs down to 15 seconds. The transmissions are scrambled using *Digital Voice Processing* ...each team is assigned one of 268 million available encryption codes. Another new NFL electronics gadget that may be used next season is the Audibilizer. A wireless microphone worn by the quarterback can be activated by a chinstrap switch to broadcast to four banks of speakers if he is having trouble being heard.



W5YI REPORT

Nation's Oldest Ham Radio Newsletter

Page #8

October 15, 1994

HAM RADIO SHOPPER ENJOYS INSTANT SUCCESS

The "Amateur Radio Trader" considers itself "The Ham Radio Marketplace" ...a name it has trademarked. ART is brand new comprehensive "shopper" type publication that targets licensed ham operators who are interested in buying, selling and trading amateur radio related products. It has risen to prominence almost over night! Started only three months ago, its most recent edition is nearly 200 pages long and goes to more than 100,000 licensed hams a month.

Content-wise, *Amateur Radio Trader* sports some 240 classified headings and has more than 200 commercial display advertisers. To get going quick, they offered new commercial display advertisers a deal they simply could not refuse!

To prove that their publication works, *Amateur Radio Trader* has an introductory offer that is totally unmatched in the industry. They run display ads for new advertisers in the first two issues (one month) absolutely FREE, the next two issues are billed a one-half price, the third month at three-fourths price ...and regular price the fourth month. Their regular advertising cost per thousand copies distributed is competitive.

Needless to say, this no-risk, no-obligation advertising plan has gotten them away from the starting gate very fast! And there is no hard sell if advertisers decide later not to continue advertising. The ads either produce or advertisers can cancel at any time.

ART is published twice a month by TAP Publishing Company of Crossville, Tennessee.. How do they do it? And just who is TAP Publishing? We called editor Nick Smith, WA4GKM - a ham for more than three decades to find out.

W5YI: Your publication is new. When did it start?

WA4GKM: The first *Amateur Radio Trader* came out August 5th. We publish twice a month. I have been with the company since May (1994). It took us about three months to get everything in place.

W5YI: We notice that it has gotten very large, very quickly. How many subscribers do you have.

WA4GKM: We have had a tremendous response to our publication ...and almost instant success with our advertisers. As hams hear about it, they are calling in and subscribing in record numbers.. As of this week, we have over 12,000 paid subscribers.

W5YI: Tell me about your company. Just who is the TAP Publishing Company?

WA4GKM: The T. A. P. actually stands for "Trade A Plane." Back in 1937, a Mr. Cosby Harrison started a small publication because he was an avid flier and he needed parts from time to time. And his friends needed parts. So he would advertise in his paper on a small scale that he needed certain parts and that he had certain aviation related items for sale. It just kind of caught on. It has grown now into the world's

largest aviation publication with over 10,000 ads and a circulation over 210,000 a month. It is in 97 countries throughout the world.

W5YI: Who are the owners of TAP Publishing Co.?

WA4GKM: The Stone family are the major principals at this time. Mr. Harrison had three daughters ...one married Roy Stone. They had six children and they primarily run the company now. It is privately held. They also publish some other papers. One of those is called "Rock and Dirt." It is also worldwide and directed at the heavy equipment industry. It has nearly the same circulation as "Trade A Plane." We also have a Spanish language "Rock and Dirt" which is shipped to the Spanish-speaking countries. Both "Rock and Dirt" and "Trade A Plane" are published three times a month. Another publication, "Trade Quip" is directed toward the oil field industry.

TAP has about 150 employees and we are building a new office building. We are growing very rapidly. The printing and production will remain in our current building and we will move our offices into a new, very nice three story complex ...about 60,000 sq. ft. ...that we are building next door.

W5YI: Are the publication formats all the same?

WA4GKM: Yes, with the exception of page size. *Amateur Radio Trader* is the smallest paper size-wise. The other papers are tabloid size. We started *Amateur Radio Trader* with 98 pages.

W5YI: Do you have any plans to become a magazine ...that is to have news, articles ...and editorials?

WA4GKM: No, we don't. That is not what we do. We feel like our editorial content is our classifieds. We know that people are very interested in looking to see the availability of used equipment and what it is worth. We want people to say, I need to look at *Amateur Radio Trader* and see what a used Kenwood TS-520S is going for. We want them to think of us as the *Blue Book* of what equipment is worth. That is kind of the way we are in the aviation industry. We do not carry editorial information in any of our publications. It is all advertising. Our subscribers are looking to buy, sell or trade something. We emphasize that to our advertisers.

W5YI: Who does your printing and production work?

WA4GKM: Everything is done "in house." We do our own printing, typesetting, production and mailing. This gives us a big advantage. We could not have started *Amateur Radio Trader* unless we had everything already in place. It has the exact same format as all of our other publications as far as display advertising, indexes, heading ...and so on. Each has classified ads in the center section.

While we accept camera ready art of film from our advertisers, it is not necessary. We offer our advertisers full-service pre-press work ...including typesetting, ad layouts and finished art, as well as film preparation ...all at no charge.

W5YI: What is the connection between amateur radio and the Stone family?

WA4GKM: I have been a friend of the company for quite some time. I am a retired pilot myself. So I have been in the aviation business for about thirty years. I have had a close relationship with the Stone family and "Trade A Plane" in general for years. When I retired from flying, we discussed

W5YI REPORT

Nation's Oldest Ham Radio Newsletter

Page #9
October 15, 1994

starting a new publication since I am a ham. When they decided that they would do it, they asked me to be the editor. I have entered into an agreement with them to be the editor of the paper ...and to help them get started.

W5YI: Then you are the only Amateur Radio link to this company.

WA4GKM: Yes, more or less. In the actual production of the paper, yes.

W5YI: How has it been going?

WA4GKM: They are absolutely overwhelmed at the early success. They really thought the paper would start out around 40 or 50 pages ...somewhere along in there. But their name recognition in the aviation and publishing business has helped them tremendously ...because it offers stability to the advertiser knowing that the company will be in business and it will support them on a long term period.

W5YI: What do you know that others do not?

WA4GKM: We have had a lot of comments about how did you folks put this together so professionally and so quickly ...being able to publish every two weeks. How do you do that? Well, we can take film or camera ready art five days before we print and then ship two days later. Our turn-around time is so much faster than anyone else's ...it is a good selling point for us. Our classified advertising deadline is only 10 days before we print. We use computer generated typesetting and have our own graphics and composition department. Two web presses are kept busy. We work very fast and our advertisers get a very quick sales reaction.

W5YI: You say you reach every ham? How do you do that? What is your distribution scheme?

WA4GKM: We cover every ham in the United States at least once every six months. No other publication does that. Our guaranteed circulation is at least 100,000 a month. We rotate through the ham FCC license base randomly and pick out 100,000 amateurs and send them a copy that month. The following month, we pick out another 100,000. We have been printing up to 70,000 copies per issue ...every two weeks. Our highest print run was 74,000 ...lowest 54,000.

The names come from the FCC, but we have our own special database by sending our promotions for subscriptions and we also run every name through the national change-of-address system to insure that the paper does indeed get delivered to a live person. We have had to update about thirty-percent of the amateur address database. We are also building our own database of deceased hams so that we won't be mailing to them. We should have a very clean database within a year. We also get the lists of new hams and upgrades in on a regular basis ...and we mail to them. We got in about 15,000 names just this week representing June, July and August new hams and upgrades.

In addition, we get out about 2,000 to 5,000 every two weeks to hamfests ...we just got back from Boxboro (Mass.) We distributed 3,000 at Virginia Beach, at Shelby we were 5,000, ...at Huntsville we distributed 3,000. We are taking 30,000 copies with us to Dayton in April. We want to go to the big hamfest in Germany also. Those are our plans. Our other publications attend all the major conventions and give out complimentary copies. We will use that same system with

Amateur Radio Trader.

W5YI: What are the plans for future.

WA4GKM: Well, when we become well established here in the United States, we hope to "go international" like our other publications. We would come out with international editions ...we are in 97 countries with our other papers. We are all set up ...all are printed in English right here (Crossville, Tennessee.) Shipment is by air. We know that there is a big demand for American equipment in Japan ...and also in Europe. We do not know of another publication in the European market like this.

ADDITIONAL INFORMATION...

The subscription rate for *Amateur Radio Trader* (24 issues) is \$14.95. But see before you buy ...sample copies are available at no cost by calling toll free 1-800-77-HAM-AD (1-800-774-2623) - the same number you use to place a classified ad.

A 20-word ad (which may be also charged to a credit card) is only \$10.00 (50¢ per word) for two issues - guaranteed to be more than 100,000 circulation - and it will run within two weeks of the time you call it in. Your ad may be placed by phone or mail. Their address is: **Amateur Radio Trader, Classified Advertising, P.O. Box 3729, Crossville, TN 38557.**

SIXTY YEARS OF GROWTH AT THE FCC!

The Federal Communications Commission observed its 60th anniversary last week of serving in the "...public interest, convenience and necessity." The FCC hosted a cake cutting ceremony on October 6th - complete with Commissioner Rachelle Chong reading "*A poem to the Communications Act.*"

In 1934 President Franklin D. Roosevelt approved legislation establishing the FCC. It replaced the old Federal Radio Commission and expanded its duties to include telegraph and telephone. Now, some sixty years later, the Communications Act of 1934 continues to be the backbone of our nation's telecommunications regulation structure.

In 1934, the FCC was an agency with 233 employees, including seven Commissioners, and a budget of \$1.14 million. It regulated a broadcast business which then consisted of 623 radio stations and a telephone industry with 14 million phones and total revenues of \$940 million. Today, there are five Commissioners, 1,964 employees and a budget of \$160.3 million.

The FCC's task has increased enormously. The broadcast industry has now grown to 21,640 stations (radio, TV and Low Power TV). And there are more video programming outlets than we can count. Spurred on by faxes, 800/900 numbers, digital data transmission and fiber optics, this year the total revenues of the telephone industry will approach \$200 billion.

RADIO BROADCASTING IN CYBERSPACE

Will tomorrow's radio and television arrive by computer?

Both the Sept. 19th *Washington Post* and *New York Times* newspapers ran very extensive and interesting articles on Internet "radio" broadcasting. The *Associated Press* and *Popular Science* magazine have also covered the new emerging technology. Most people are totally unaware that audio can also be plucked from the Internet.

The *Internet Multicasting Service* (IMS) is a brand new digital audio network that broadcasts through cyberspace rather than being carried by radio frequency waves. An advantage is that, unlike traditional radio broadcast stations, cyberspace radio requires no FCC approval or license. Basically audio and multimedia programs are digitized and distributed on the global Internet computer network, the so-called network of networks that reaches 30 million people in over 140 countries. The Internet continues to grow at the rate of 15-20 percent *per month*.

Headquartered in Washington, DC, the non-profit company was formed to develop new uses for digital communications. The service is the brain child of Carl Malamud, 35 and a handful of part-time computer enthusiasts. They began by broadcasting two or three hours of digital programming daily. Starting in January the "broadcast" station will be sending out their massive steady stream of ones-and-zeros around the clock. They use the self-assigned call letters of "Cyberstation RTFM" ...which stands for Radio Technology for Mankind.

Located in Washington, DC's National Press Building, the Internet Multicasting Service's cyberspace radio station currently operates two channels. Its objective is to be a professional, informative source of news and information about public affairs and the world of science and emerging technology.

The *Internet Town Hall* is the public affairs channel and *Internet Talk Radio* covers science and technology. Until last year, a broadcasting station operating in space was largely unthinkable. Now, RTFM is not only a reality, it sends out hundreds of megabytes of programs per month to more than 100,000 PC users in over 30 countries around the world! That audience includes leading research institutions, corporations, and universities in places ranging from New York to Moscow to Sydney to Tokyo.

Programs have included luncheon addresses from the National Press Club in Washington, D.C. Speakers range from Yassar Arafat and the Dalai Lama of Tibet ...to Larry King and Senator Bob Dole. Distinguished figures from the arts and letters such as Robert Frost and Ernest Hemingway can be heard reading their own works.

A popular talk show is the "Geek of the Week"

interview which features computer nerds with far out thinking. Numerous programs from public broadcasting ...such as *Technation*, *Dialogue* and *Common Ground* are also presented. The broadcasts, like computer data can be transmitted globally, stored, and searched. "Listeners" can even send immediate comments back to the speakers by e-mail.

In addition to the regular daily programming, RTFM produces many special events. The *Global Schoolhouse Project* allowed children in London and the United States to brief senior government officials via an Internet videoconference about the results of their research on the environment. An On-line Santa Claus answered over 5,000 e-mail messages from all over the world addressed to santa@north.pole.org.

The Internet Multicasting Service is not limited to audio data. Under a grant from the National Science Foundation, the full text of all 1994 U.S. Patent and SEC documents are posted for free access on the Internet. The project was heralded by the *New York Times* as "U.S. Shift to a Freer Data Policy" and a White House spokesman called the project an administration priority and "...another indication of the Administration's commitment to make Federal information available to the taxpayers who paid for it."

The Internet Multicasting Service received its initial funding in both money and donated equipment from Sun Microsystems (a computer hardware firm) and O'Rielly & Associates - a technical publisher which includes Internet books and access software. Many other companies now participate in the project ...including MCI, the National Science Foundation and Cornell University.

Only a few thousand "Technofans" worldwide have the highspeed (64K bits/second) capability necessary to listen to live audio transmissions over their computers. And a one hour broadcast translates into 30 megabytes of storage.

"But millions of Internet subscribers with standard personal computers and regular phone lines will be able to retrieve pieces of the audio from the repositories in RTFM's computer data bases, where billions of bytes of audio and text files are accumulating. The technology needed to convert spoken words into computer bits, transfer them over special telephone lines and then package them in a way to be useful for listeners is still experimental." And downloading at slower baud rates from the Internet can take hours.

Eventually, it is hoped, that users will be able to call up just about any speech for later playback in the speaker's voice along with related text, charts and photographs. The Internet Multicasting Service even hopes to implement speaker recognition software that will be able to search their archives for the sound patterns of people's voices.